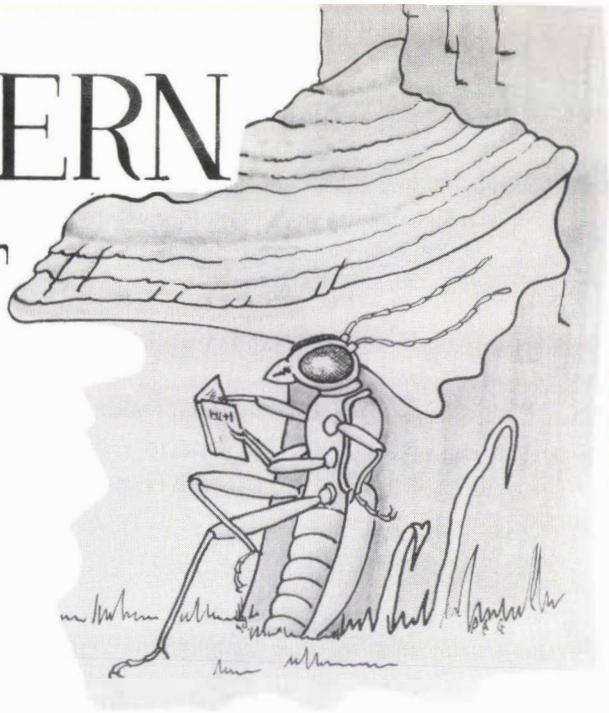
NORTHEASTERN FOREST PEST REPORTER



United States Department of Agriculture
Forest Service Region Seven

6816 Market St., Upper Darby, Pa.

Pest Control Zone Offices
Amherst, Mass.
Harrisonburg, Va.

MBER 1 April, 1964

FOREWORD

This issue of the Reporter highlights forest insect and disease conditions reported in 1963. With the arrival of another active field season it is hoped that this information will provide a base from which an improved and expanded detection program can be conducted in 1964.

AGRICULTURE — MCELWEE, PHILA., PA.

HIGHLIGHTS OF 1963

SPRUCE BUDWORM (Choristoneura fumiferana) - Map 1

Maine successfully sprayed 479,000 acres of spruce-fir type. It is planned to treat another 50,000 acres this year.

A 760 acre pilot test applying Bacillus thuringiensis from a helicopter against the spruce budworm was also tried in northern Maine. Results were disappointing in that not over 50 percent of the larvae were killed. The test revealed that further refinements are needed both in materials and methods of application.

PINE LOOPER (Lambdina athasaria pellucidaria)

The planned pilot test against the Pine looper on Cape Cod was called off because of the sudden decline in larval populations. A polyhedral virus was found in young second and third instar larvae. The virulence of the virus and its effects on the population was not determined. The area will be watched in 1964 with the view of learning more about the organisms which caused the decline.

FALL CANKERWORM (Alsophila pometaria)

The Jefferson National Forest successfully sprayed 930 acres to control this insect. The conventional DDT formulation was applied by helicopter.

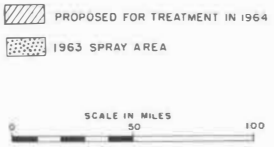
LINDEN LOOPER (Erannis tiliaria)

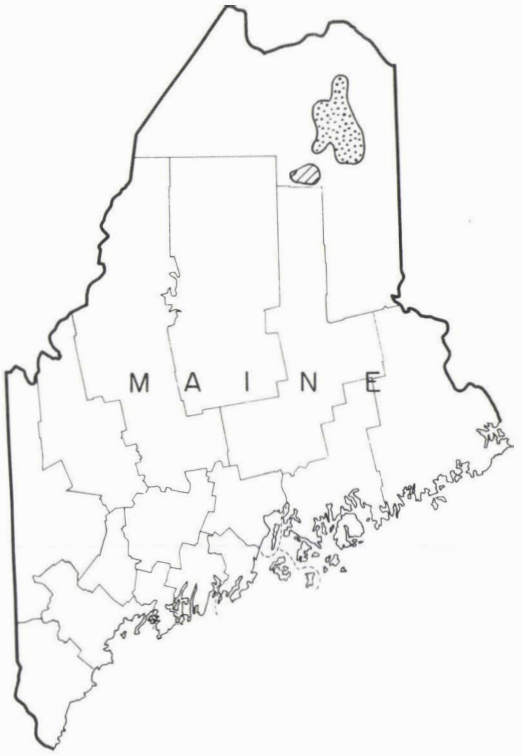
Scattered populations of the linden looper were observed throughout the Region. Heavy parasitism and high incidence of a disease (wilt) were the prime factors responsible for the decline of the looper in the Northeast.

A LOOPER (Phigalia titea)

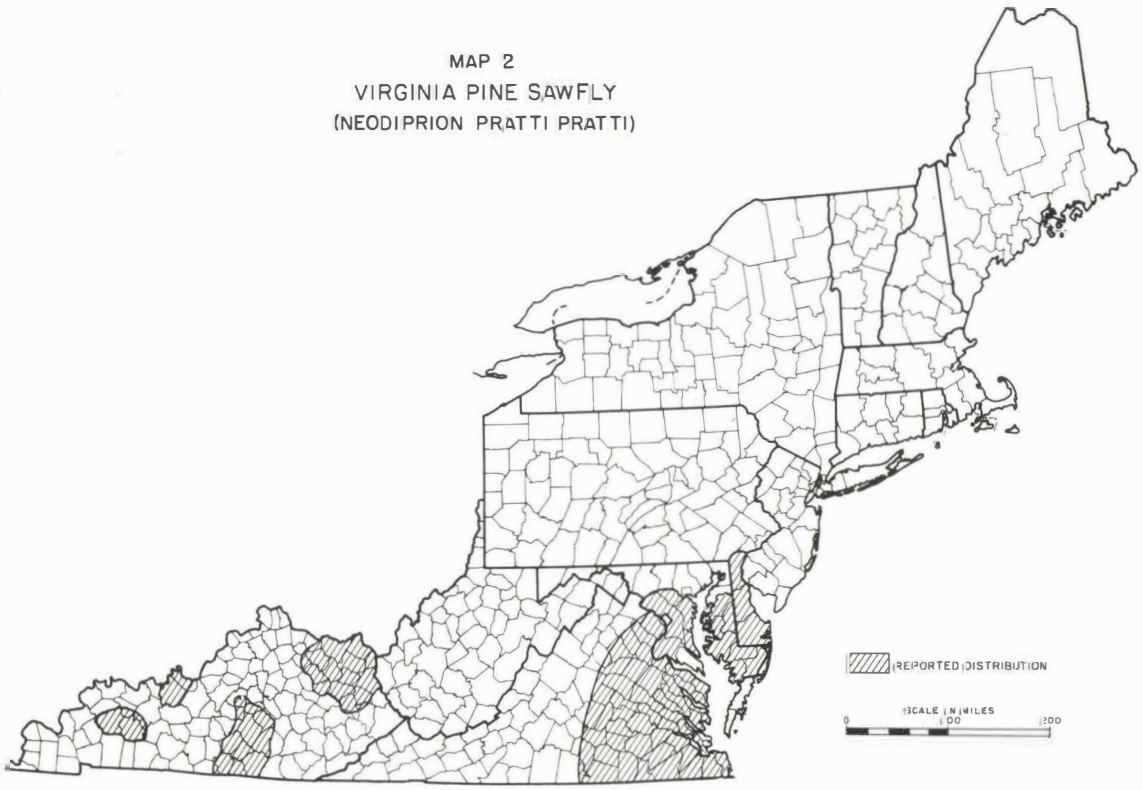
The looper, Phigalia titea, continued to defoliate about a 1,000-acre tract of oak-hickory forest on Short Mountain, in the Virginia portion of the George Washington National Forest last spring. Similar defoliation can be expected in 1964. This looper was also abundant on oak in Lackawanna County, Pennsylvania.

MAP 1
SPRUCE BUDWORM
(CHORISTONEURA FUMIFERANA)





MAP 2
VIRGINIA PINE SAWFLY
(NEODIPRION PRATTI PRATTI)



FALL WEBWORM (Hyphantria cunea)

Localized heavy infestations along the Blue Ridge Parkway were sprayed in mid-July with mistblowers, using a DDT emulsion. Adequate control was achieved.

VIRGINIA PINE SAWFLY (Neodiprion pratti pratti) - Map 2

Defoliation continued to decline throughout the Piedmont and Coastal areas of Virginia, Delaware, Maryland and northeastern Kentucky. Defoliation was much lighter than previous years.

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - Map 3

Populations of this defoliator remained at a low level throughout the Region with localized increases. Defoliation in some of these areas ranged from 10 to 75 percent.

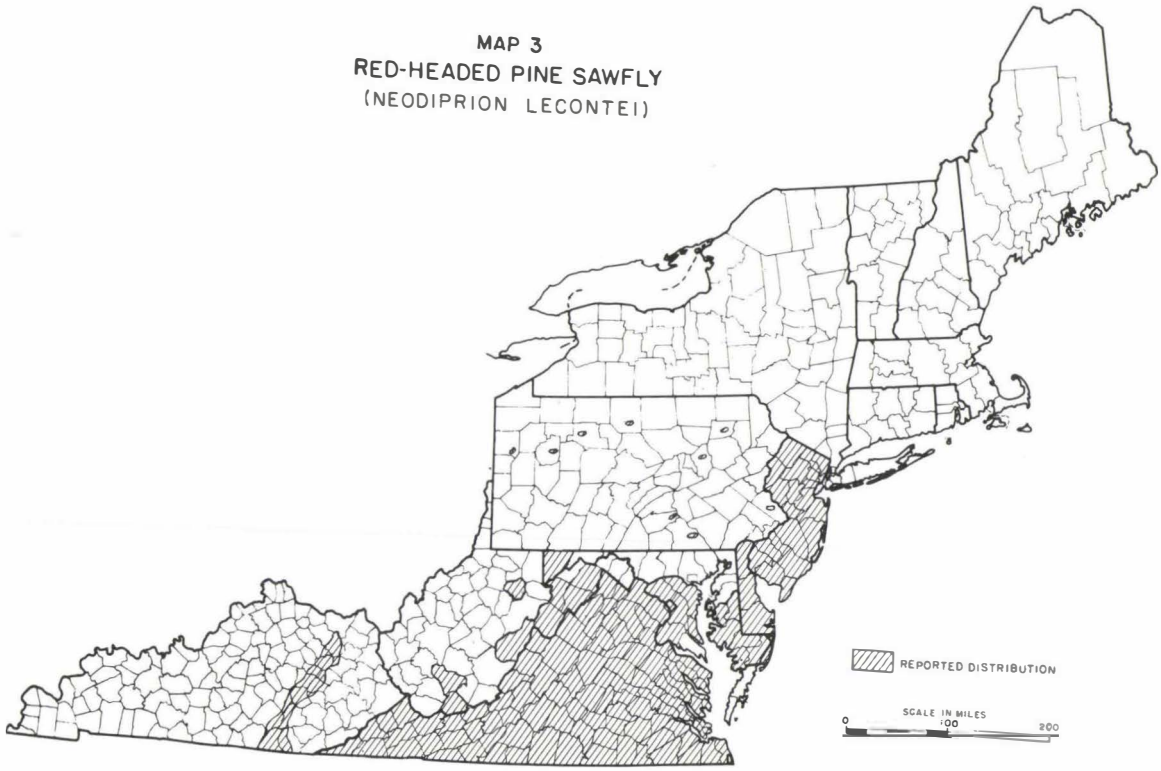
The processing and storing of the polyhedral virus disease of this sawfly as well as viruses of other insects is continuing at the Southern Forest Pest Control Zone in Harrisonburg, Virginia.

WHITE-PINE WEEVIL (Pissodes strobi) - Map 4

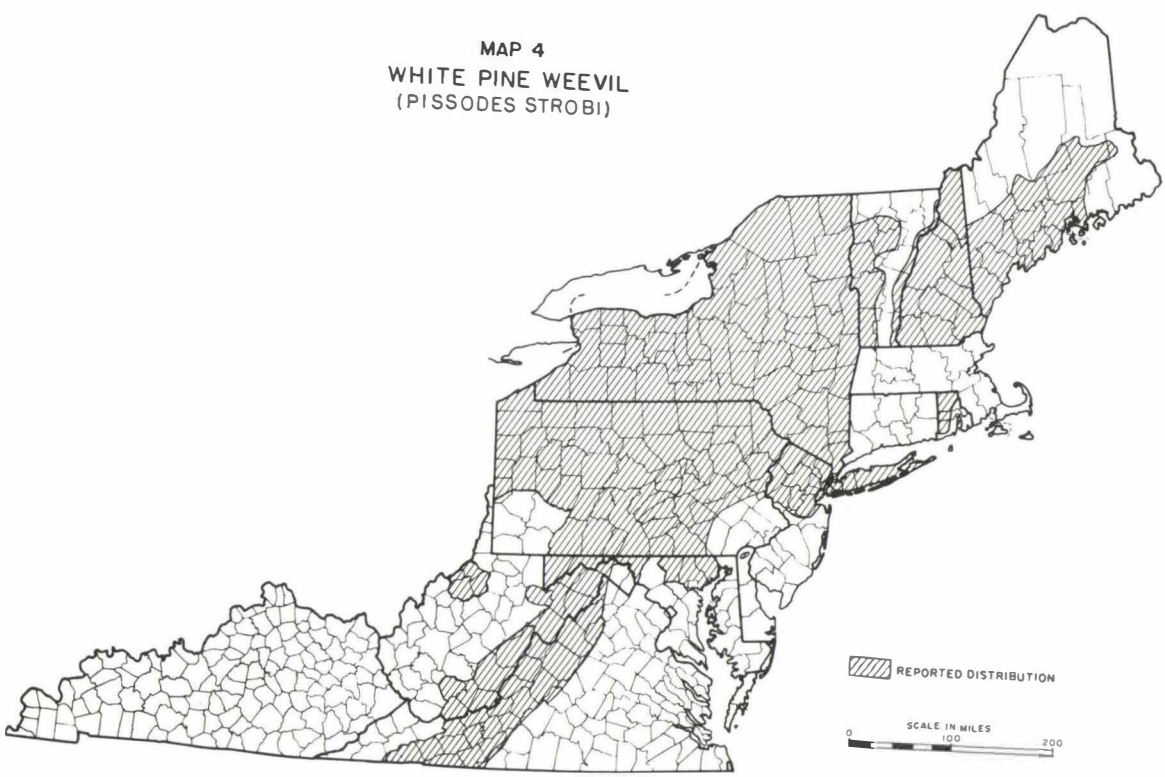
New York treated 108 acres of white pine last fall. Various dosages of lindane and aroclor were applied by truck-mounted mistblower (44 acres), hand hydraulic sprayer (60 acres), and backpack mistblower (4 acres). The results will be determined this year. Pennsylvania successfully treated 358 acres of white pine and Norway spruce in the spring of 1963.

A number of small white pine areas were also treated in various parts of the Region using backpack sprayers to apply solutions of DDT, lindane, or lead arsenate.

MAP 3
RED-HEADED PINE SAWFLY
(NEODIPRION LECONTEI)



MAP 4
WHITE PINE WEEVIL
(PISSODES STROBI)



NANTUCKET PINE TIP MOTH (Rhyacionia frustrana))
PITCH PINE TIP MOTH (R. rigidana)) Map 5
EUROPEAN PINE SHOOT MOTH (R. buoliana)

Tip and shoot moths continued to stunt and deform red, jack, loblolly, shortleaf, pitch and Virginia pines over most of the Region. Damage by the European pine shoot moth reported as especially severe in jack pine plantings in Pennsylvania.

PINE LEAF APHID (Pineus pinifoliae) - Map 6

Infestations of this aphid remained severe in eastern Maine, New Hampshire, Vermont and New York. Experimental control tests with Cygon and Sevin were carried out in Maine and in New York. Some degree of control was obtained from the June application of Cygon. Better timing in future tests might increase the effectiveness of this insecticide.

BALSAM WOOLLY APHID (Chermes piceae) - Map 7

Damage by this pest was reported to be increasing in Maine, New Hampshire and Vermont. The infestation on Fraser fir in the Shenandoah National Park, Virginia, remained unchanged. Damage there was limited to gout with a few trees dying annually.

In 1963 approximately 1834 adults of the predator Laricobius erichsonii were released in Maine (704) and on the Green Mountain National Forest (1130). An evaluation of these releases is planned for 1964.

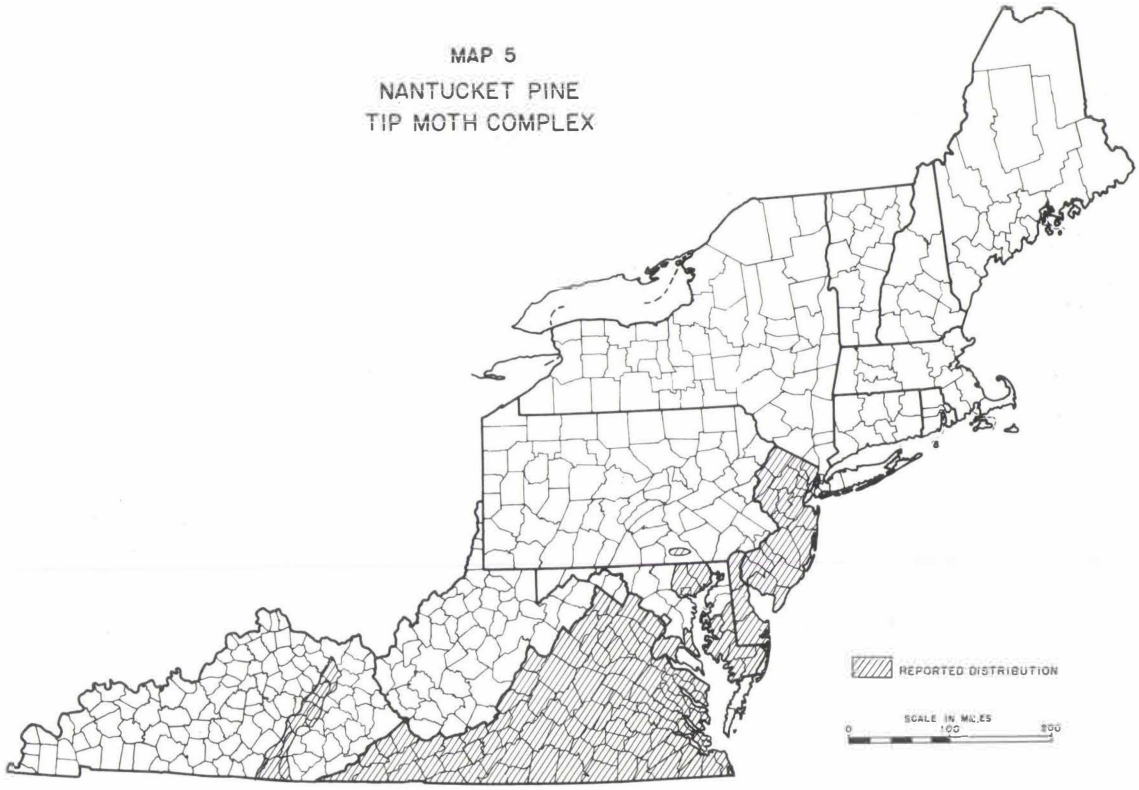
RED PINE SCALE (Matsucoccus resinosae)

The general range of this scale has not changed much in the past year. It is still confined within a fifty mile radius of New York City. There was, however, a slight spread within the area of infestation. In New York State a slight spread to the north was noted. In Connecticut there was an east-west spread at an average rate of five miles in three years. New Jersey reported a reinfestation in a previously treated area near Erskine and Cupsaw Lakes in Ringwood Borough. That State is continuing its diligent effort to locate and destroy all infested trees.

It is hoped that a more intensive coordinated survey of this important pest can be conducted in 1964.

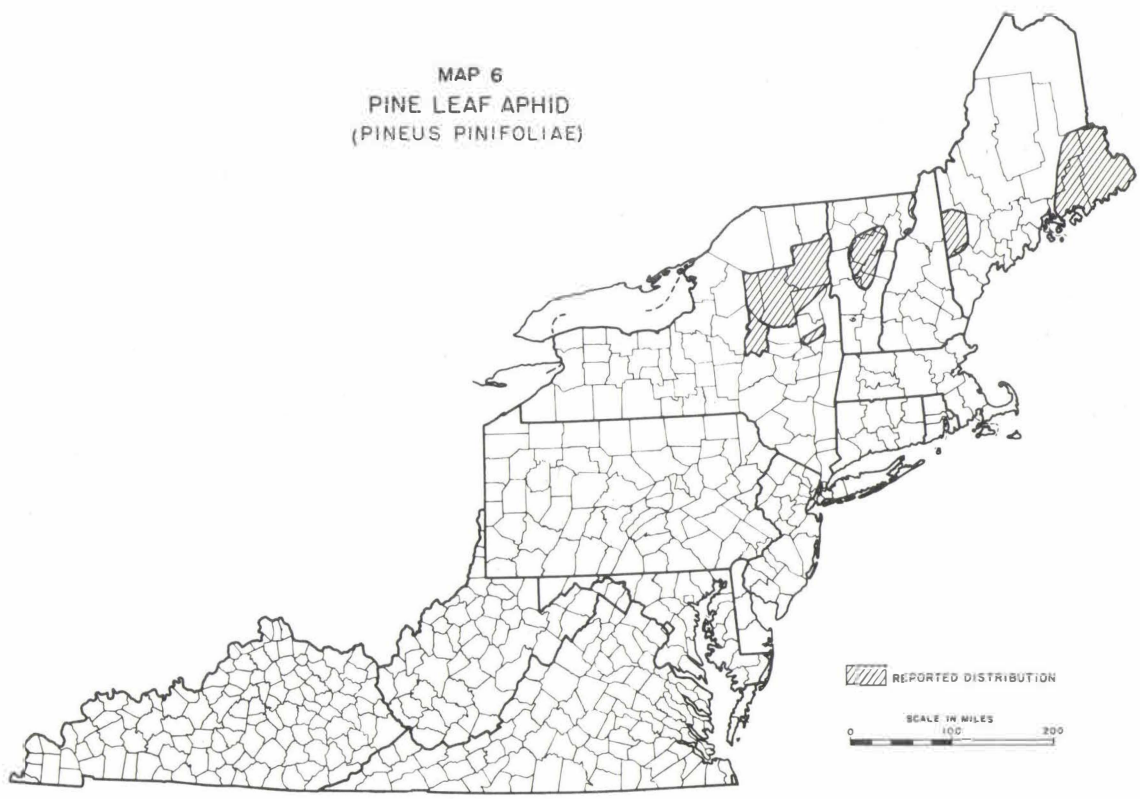
MAP 5

NANTUCKET PINE
TIP MOTH COMPLEX



MAP 6

PINE LEAF APHID
(PINEUS PINIFOLIAE)



SOUTHERN PINE BEETLE (Dendroctonus frontalis) - Map 8

An active infestation was found in a loblolly pine area near Clarksville, Sussex County, Delaware. Salvage of infested trees and harvesting of the merchantable pine in the area was recommended by the State Forester.

The flare-up of the southern pine beetle in Virginia had declined considerably. Quick salvage and low winter temperatures were believed to have brought about the collapse of the outbreak. The drought of 1963 was expected to trigger additional activity by this beetle but only scattered localized infestations developed. Ips beetles are now associated with many of the southern pine beetle infested trees.

Increased activity of the Black Turpentine Beetle (Dendroctonus terebrans) was also reported in Delaware and Virginia, and is also believed to be associated with the drought.

MISCELLANEOUS INSECTS

Increased defoliation by the Larch Sawfly (Pristiphora erichsonii) was observed in Maine, New York and Pennsylvania in 1963. The Orange-striped Oakworm (Anisota senatoria) was reported as defoliating thousands of acres of scrub oak in southeastern New Jersey and on several hundred acres of mixed oak in southern Pennsylvania. Defoliation of oaks by the Oak Leaf Rollers (mainly Croesia (Argyrotoxa) semipurpurana) continued in New Jersey and Pennsylvania.

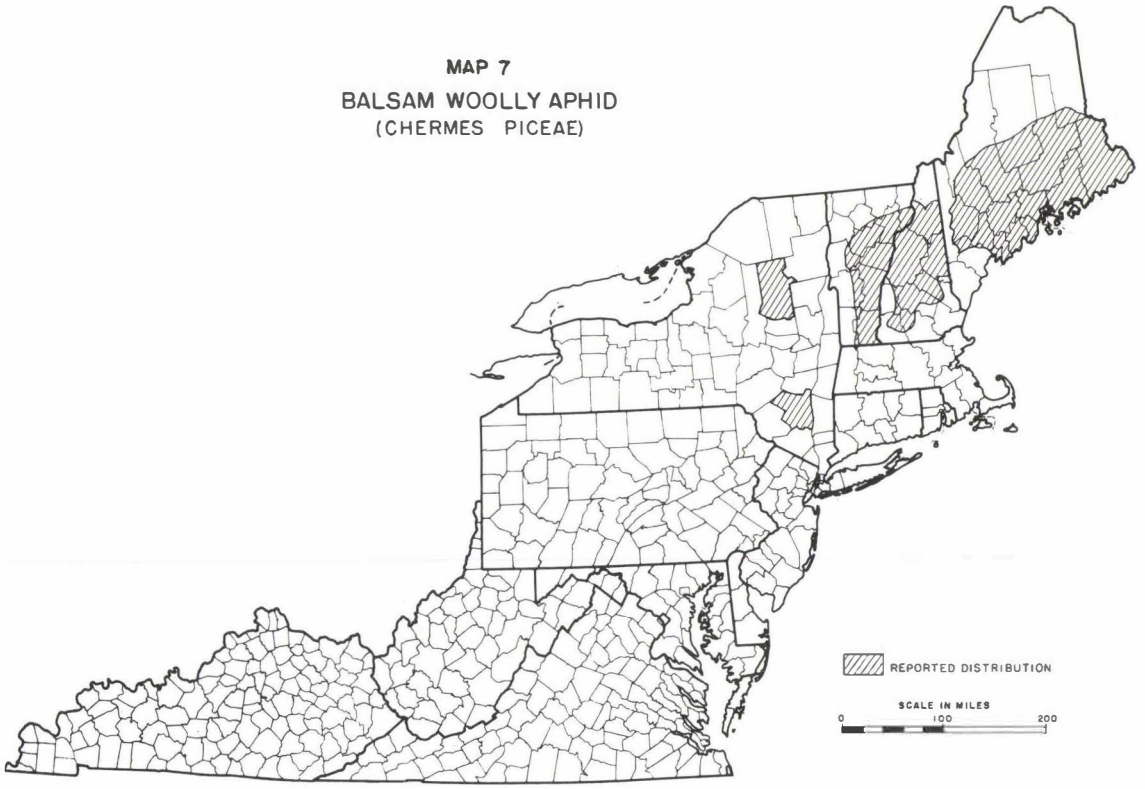
Damage by the Saratoga Spittlebug (Aphrophora saratogensis) to planted red pine was reported as locally severe on the Massabesic Experimental Forest at Alfred, Maine. The Pit-Making Oak Scale (Asterolecanium sp.) caused considerable damage to oaks in New York and Pennsylvania. Severe dieback was noted in many areas.

Sugar maple reproduction in Vermont was reported to be seriously damaged by an Ambrosia Beetle (Corthylus punctatissimus). In Washington County, practically all young (1/4" - 1" diameter) maples were infested. Considerable root or stem decay resulted from these attacks.

MAP 7

BALSAM WOOLLY APHID

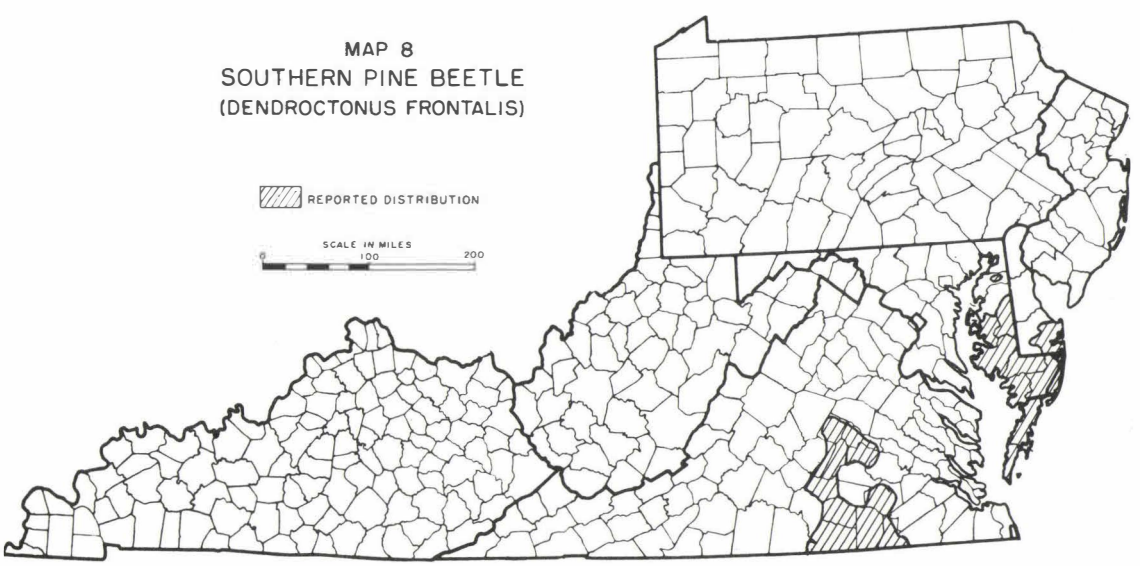
(CHERMES PICEAE)



MAP 8

SOUTHERN PINE BEETLE

(DENDROCTONUS FRONTALIS)



ASH DIEBACK (cause unknown)

The ash dieback survey conducted this summer was completed in six states with a total of 201 plots examined. The data is now in the process of being analyzed. Survey results indicate conditions were slightly more severe in Pennsylvania than in the other five states. Increment cores taken from dieback trees in Pennsylvania showed that radial growth of ash in all classes was slowing down.

Approximately 25 white ash trees (d.b.h. 12" - 16") showed decline in McKean County on the Bradford Ranger District, Allegheny National Forest. The type of decline exhibited by the trees was characteristic of ash dieback; declining from the upper crown downward and sprouts developing on the trunk. The affected trees were spread over 300 acres and were being marked for utilization and salvage.

BEECH SCALE-NECTRIA COMPLEX (Cryptococcus fagi and Nectria coccinea var. faginata) - Map 9

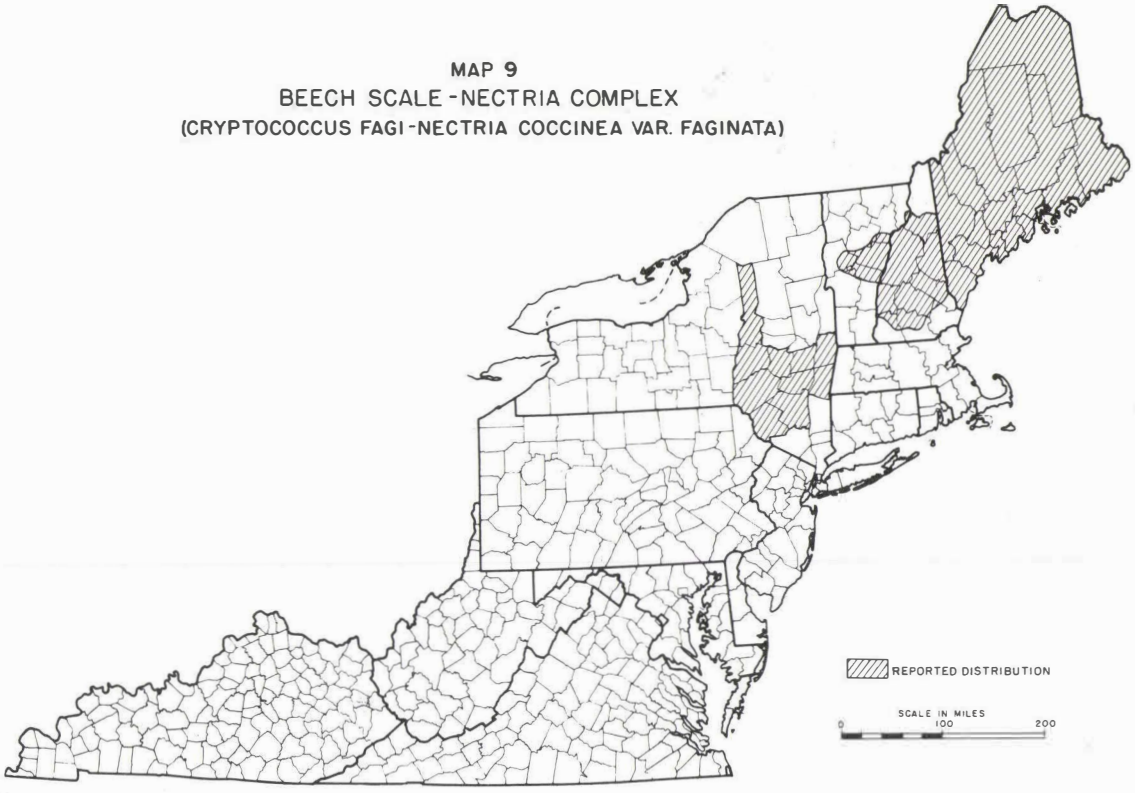
The beech scale and the associated Nectria fungus were found in high concentrations in Maine, New Hampshire, Vermont and New York. Increased scale and Nectria activity was reported from New York.

Beech scale infestations noted in Massachusetts wherever mature beech was found, but no evidence of Nectria. Light to heavy infestations of the scale were reported from Pennsylvania. No Nectria cankers were found on any of the infested trees, nor was there any tree mortality.

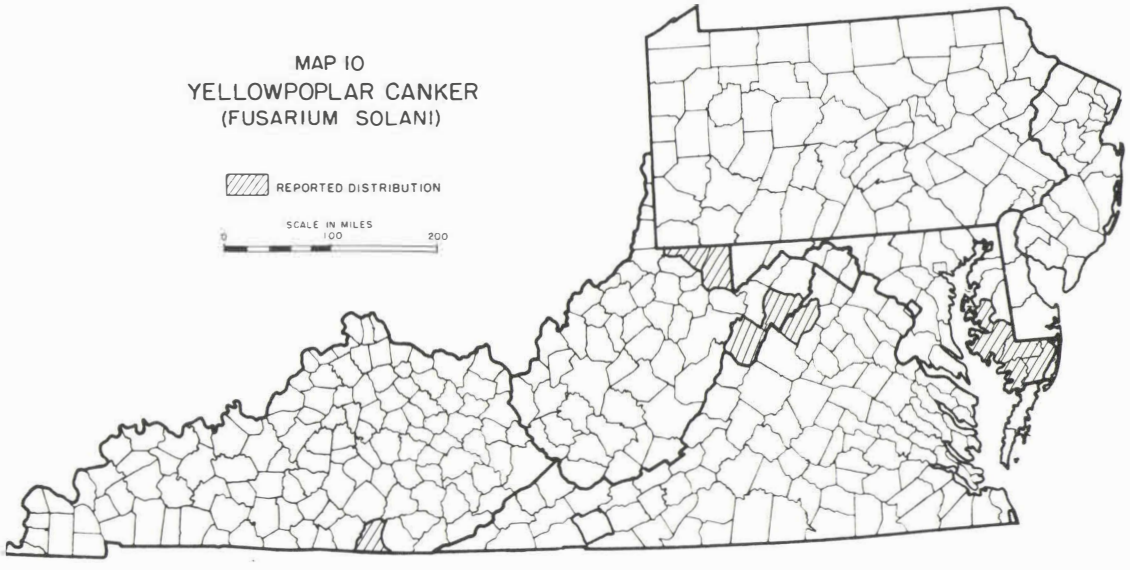
YELLOWPOPLAR CANKER (Fusarium solani) - Map 10

This disease of yellowpoplar was reported as being present in southeastern Maryland, northeastern West Virginia, northwestern and southwestern Virginia and southeastern Kentucky. So far, the disease has not increased in intensity.

MAP 9
BEECH SCALE - NECTRIA COMPLEX
(CRYPTOCOCCUS FAGI - NECTRIA COCCINEA VAR. FAGINATA)



MAP 10
YELLOWPOPLAR CANKER
(FUSARIUM SOLANI)



EUROPEAN LARCH CANKER (Dasyscypha willkommii)

A resurvey for the European larch canker was started in February 1964 in Essex County, Massachusetts. The first surveys were made between 1927 and 1938 at which time over 3700 introduced diseased larch were destroyed. The last survey made in 1952 turned up only three European larch found infected.

Because the larch canker is a serious disease and has been confined to a limited area in Massachusetts, constant vigilance is necessary. Although no new infections have been reported, the area previously infected is now being resurveyed to determine if the previous suppression attempt was successful.

OAK WILT (Ceratocystis fagacearum) - Map 11

Reports received on the cooperative oak wilt control program between the U. S. Forest Service and the States of Pennsylvania, West Virginia, Virginia and Kentucky for 1963 indicated an increase in the incidence of infection in Pennsylvania and West Virginia, a small increase in Virginia, and a decrease in Kentucky. Although there was no cooperative oak wilt program with the State of Maryland, some control work was carried on by the State. Maryland reported a static situation as far as this disease was concerned. In general there was no great change in the oak wilt situation from the previous year.

OAK MORTALITY (cause unknown)

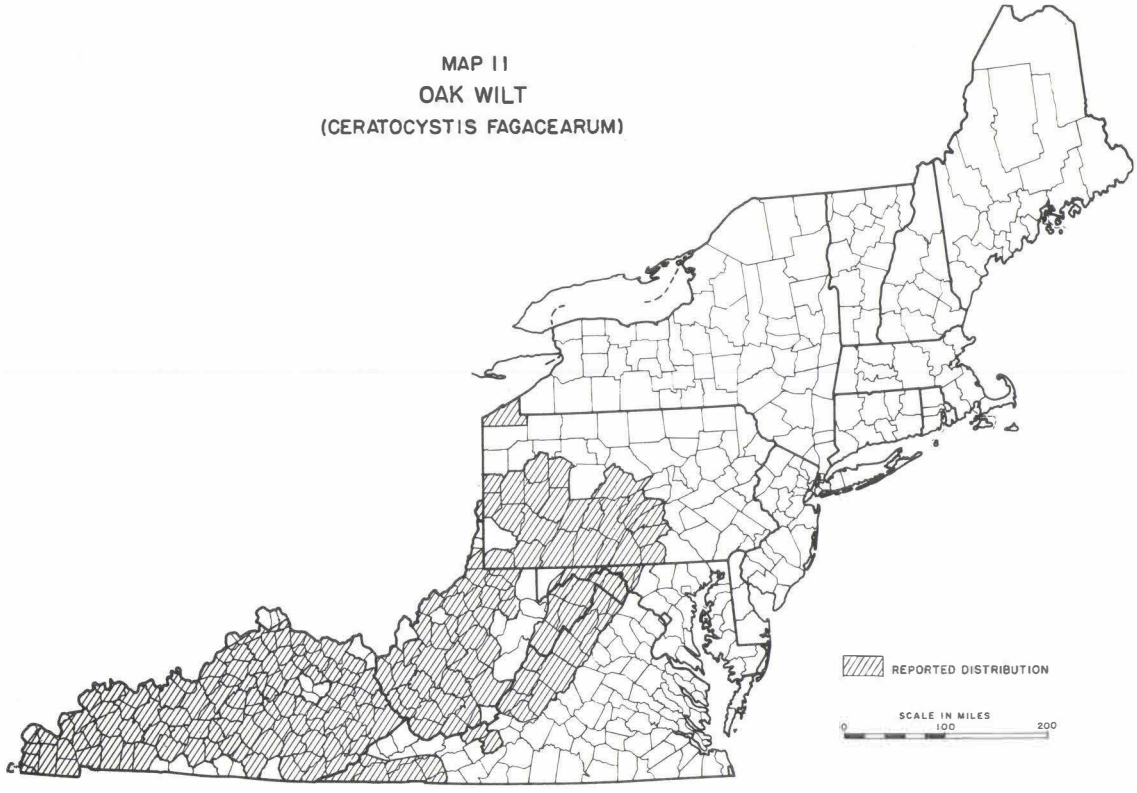
Many oaks of the red oak group and some white oaks died last year. Leaves on one or more branches wilted, or the entire tree died within one or two weeks. Twigs showed brown streaks and leaves were often dull green when wilted. Both of these symptoms are commonly associated with oak wilt. Repeated isolations were made, but Ceratocystis was not isolated. Many fine dominants, as well as suppressed trees, were killed. The disease was reported from Long Island and eastern New York, from eastern and central Pennsylvania, southwestern Connecticut, and from southern Maine.

Pathologists believe the disease is indirectly related to prolonged moisture deficiencies. Drought-weakened trees were heavily attacked by the two-lined chestnut borer, Agrilus bilineatus and by the root rot fungus, Armillaria mellea.

MAP 11

OAK WILT

(CERATOCYSTIS FAGACEARUM)



ANNOSUS ROOT ROT (Fomes annosus)

Fruiting of this fungus and the resultant production of spores was almost completely suppressed in 1963 due to dry conditions. Vegetative spread of the fungus, however, seemed to have continued unabated, with reports of newly found infection areas received from Maine to Virginia.

LITTLELEAF DISEASE (Phytophthora cinnamomi)

The disease was reported from the central or Piedmont section of Virginia, but did not cause serious damage although scattered mortality and symptomatic living shortleaf pines were observed. Newly discovered spots of infected trees were reported from Louisa County. In Kentucky it was especially prevalent on the Williamsburg Ranger District of the Cumberland National Forest. Trees exhibiting all symptomatic stages were found, which suggests that the disease had been well established there for many years.

WHITE PINE BLISTER RUST (Cronartium ribicola)

White pine blister rust control continued in ten states of the Northeastern Region in 1963. Except in newly established white pine areas, most of the control work was of a maintenance nature. Ribes infection during the year was relatively light due to the unusually dry season.

MISCELIANEOUS DISEASES

The Woodgate or Western Gall Rust (Peridermium harknessii) was reported to be spreading in the Adirondack Region of New York. An unknown white pine needle blight appeared to be increasing in intensity in southwestern Maine.

FOREST PEST CONTROL NOTES

SURVEY TRAINING SESSION

Forest entomologists and pathologists from the Forest Service and from New Jersey, Pennsylvania and Virginia met in New Haven, Connecticut, on January 6, 1964 for a two-week training session in techniques for evaluating forest pest populations and their destructive effects.

Instructions were given by Dr. W. E. Waters, D. G. Mott, J. H. Lowe, R. W. Wilson, R. C. Heller, R. C. Aldrich and F. P. Weber of the Forest Insect Laboratory, Beltsville, Maryland. Methods used in planning, conducting and analysing survey and sampling programs were evaluated and revised to make them more efficient in providing a sound basis for decisions on control.

WHITE-PINE WEEVIL CONTROL CONFERENCE

A white-pine weevil control work conference was held in Albany, New York in February, 1964. The main objective of this conference was to review all known weevil control programs that had been carried out in the Region; to obtain data on the effectiveness, advantages and disadvantages, and costs of each of the various formulations and application techniques used; and finally, to analyze and consolidate this information into a set of guidelines that will be used to develop an action program for white-pine weevil control.

Cooperative Forest Insect and Disease Control programs in Region 7, U. S. Forest Service, are serviced through two Zone offices, designated as the Northern Forest Pest Control Zone and the Southern Forest Pest Control Zone. The Zone offices are centrally located to provide the maximum of on-the-ground service to the state cooperators. All inquiries pertaining to federal participation in forest insect or disease problems should be directed to the respective Zone office as follows:

Northern Forest Pest Control Zone
U. S. Forest Service
6 Maine Street
Amherst, Massachusetts

Tel: Alpine 3-5640

Serving: Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut
New York

Southern Forest Pest Control Zone
U. S. Forest Service
1000 South High Street
Harrisonburg, Virginia

Tel: 434-4277

Serving: Pennsylvania
New Jersey
Maryland
Delaware
Virginia
West Virginia
Kentucky

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Is address shown correct ?_____YES _____NO

If not give corrected address below:

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Your replying to the following questions will enable us to make the REPORTER of more use to you.

Do you find the information given in the Reporter useful?_____YES_____NO

Comments:_____

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What type of information would you like to have included?

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